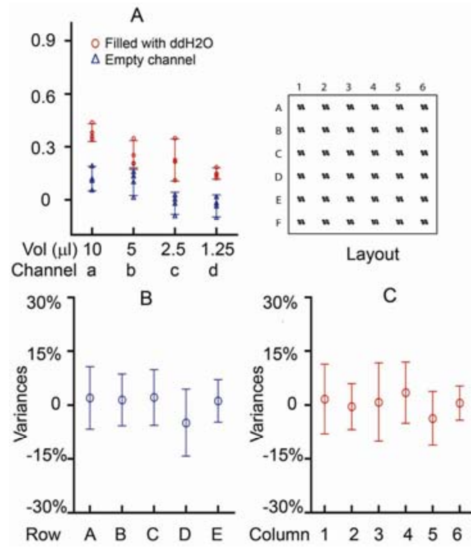
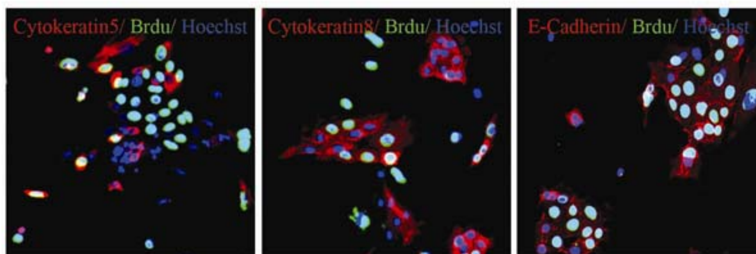
Supplementary figures



Supplementary Fig. 1 The background and channel-channel variations in the fluorescence plate assays. (A) In order to determine the background sources of the PDMS arrays, microchannels of all four modules (see Fig. 1A) were filled ddH_2O or left empty and detected at 450/590 nm. The background levels from channels increased after filling with ddH_2O compared to channels left empty ($P < 0.05$, $n = 6$). (B) and (C) The 1.25 µl microchannels with the layout shown were used to examine the signal variance between channels. Channel A1~ E6 were filled with fluorescence bead solution (16,000 beads per channel) and channel F1 ~ F6 were filled with ddH_2O as controls. The variations of the readings from channel A1~ E6 were compared between (B) rows and (C) columns. No significant differences were found between the measurements of individual channels ($P > 0.05$).



Supplementary Fig. 2 Post plate-assay immunocytochemistry characterization of MECs. MECs were supplied with 15 µM Bromo-Deoxyuridine (BrDu, Roche, 1-299-964) during 24-48 hour microchannel culture period. The MECs stained with Hoechst 33342 were analyzed with plate reader followed by staining with antibodies specific to Brdu and cytokeratin 5, cytokeratin 8 or E-cadherin inside of microchannels. Distinctive MEC populations expressing different antigens are clearly seen from these images.